REMARKS

This is in response to the Office Action dated August 24, 2004. Claims 1-6 are pending.

It is noted that applicant does not acquiesce to any alleged definition provided for any claim term(s) set forth by the Examiner in the Office Action. For example, the objection to claims 5-6 is respectfully traversed. The subject matter of claims 5-6 is not inherently provided in claim 1 as alleged in the Office Action. There are differences between the claims. It is not proper to read limitations from the specification into the claim as the Office Action appears to do in connection with the improper objection to claims 5-6.

Claim 1 stands rejected under 35 U.S.C. Section 102/103 as being allegedly unpatentable over JP '556. This Section 102/103 rejection is respectfully traversed for at least the following reasons.

Claim 1 requires, *inter alia*, that "the surface roughness of the conductive substrate caused by a cutting process is such that maximum peak-to-valley roughness height (Ry), centerline average roughness (Ra), ten-point average roughness (Rz) and average peak-to-peak distance that is an average of a peak-to-peak distance of a cross-sectional curve (Sm) satisfy . . . (e) Pc = 60 to 100." The cited art fails to disclose or suggest this aspect of claim 1.

In JP '556, a base substrate for a photosensitive body is processed with a grinding tape. Accordingly, this grinding process is fundamentally different from the cutting process called for in amended claim 1 (and claim 2) (e.g., in which a diamond cutting tool is used). The process with a grinding tape, as compared to a cutting tool, exhibits considerable variations in surface condition due to structural differences between the grinding tape and the cutting tool. Thus, uniform surface properties cannot be obtained over the entire surface of the substrate. Accordingly, values of "peak count Pc" fluctuate too much in some places of JP '556. In

contrast, according to the invention of claim 1 (and claim 2), a cutting process is used, and a remarkable advantageous effect of stable surface property is obtained over the surface of the substrate (see Pc).

Additionally, JP '556 is similar to the art discussed in the background section of the instant application. In particular, JP '556 seeks to solve interference fringe problems by using particular parameters for Ry, Ra, Rz and Sm. However, the instant specification explains that this is insufficient. For example, the instant specification explains, beginning at the last line of page 10, that:

> That is to say, it is known [as in JP '556 cited in the Office Action] that the interference fringes (dark and light stripes in images) caused by multiple reflection in the photosensitive layer in an electrophotographic process using coherent light are affected by the surface roughness of the substrate and the fine waveform shape, and an effect of suppressing occurrence of the interference fringes can be obtained by setting Ry, Ra, Rz and Sm of the substrate surface to a predetermined size (roughness) or more to make the surface be rough.
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> However, for interference fringes occurring in the images formed in an image forming apparatus having a small light spot, it is difficult to correlate the occurrence of the interference fringes and the surface roughness *only* with Ry, Ra, Rz and Sm. However, in addition to Ry, Ra, Rz and Sm, a peak count Pc obtained by counting the number of peaks having a height equal to or more than a predetermined width from the top point to the bottom point in the reference length that is the predetermined measurement distance is introduced, so that the correlation between the occurrence of the interference fringes and the surface roughness can be clarified. Moreover, the occurrence of the interference fringes is prevented by limiting Ry, Ra, Rz, Sm and Pc to be within a preferable range, so that it is possible to measure the thickness of the layer with high precision by the optical interferometry in an area having a rough surface roughness."

Accordingly, the instant inventors have discovered that using only Ry, Ra, Rz and Sm as in the cited reference is insufficient. In particular, using only these 4 parameters, the surface roughness often becomes too great and the thickness of the layer cannot be adequately measured using optical interferometry with high precision, and thus layer thicknesses cannot be adequately

controlled. The instant inventors have found that limiting Pc to the claimed range of from 60 to 100 can be used to solve this problem, so that layer thickness can be measured using optical interferometry with high precision to achieve superior products.

JP '556 does not even suggest or hint at the problem identified by the instant inventors. For instance, JP '556 does not mention measuring layer thickness using optical interferometry. Thus, it can be seen that the problem identified by the instant inventors is not mentioned in the cited art. Moreover, the cited art is entirely silent as to Pc, and clearly fails to disclose or suggest a Pc value in the claimed range of from 60 to 100 as required by claim 1. JP '556 is entirely unrelated to the invention of claim 1 in this respect.

The Office Action appears to contend that JP '556 inherently has a Pc of from 60 to 100 because the reference states that there is no interference fringe. This allegation is without support, and is incorrect. This claimed feature is clearly not inherent in the cited JP '556 reference. The presence of no interference fringe cannot be used to argue that a Pc of from 60-100 is inherent in JP '556. In fact, as discussed above, the instant specification explains that the 4 parameters Ry, Ra, Rz and Sm can be used to avoid interference fringe. However, the instant specification explains that using only these 4 parameters is insufficient, because the surface roughness often becomes too great and the thickness of the layer cannot be adequately measured using optical interferometry with high precision (and thus layer thicknesses cannot be adequately controlled). Accordingly, the instant inventors have found that limiting Pc to the claimed range of from 60 to 100 can be used to solve this problem, so that layer thickness can be measured using optical interferometry with high precision to achieve superior products.

JP '556 clearly fails to disclose or suggest the Pc values required by claim 1, and does not even hint at the example problem which the instant inventors discovered which led to the use of this parameter. The cited reference is fundamentally flawed.

Claim 2 also requires a Pc of from 60 to 100. As discussed above, JP '556 fails to disclose or suggest this aspect of claim 2. Moreover, citation to JP '815 cannot overcome the fundamental flaws of JP '556 mentioned above. Again, the invention of claim 2 also clearly defines over the cited art.

Claims 5-6 require that "the peak count Pc is obtained by counting the number of peaks which have a height equal to or more than a predetermined width from a top point to a bottom point in a reference length." The cited art fails to disclose or suggest this aspect of claims 5-6. In contrast with claims 5-6, W_{CM} shown in JP '556 is a so-called maximum filtered waviness. This represents a maximum wave height in a taken-out portion corresponding only to the reference length from the waviness curve obtained by removing short wavelength components from the profile curve of a solid surface. In other words, in such a W_{CM} measurement in JP '556, peak count has been removed. Thus, it can be seen that W_{CM} and peak count Pc are quite different and are clearly not the same thing.

For at least the foregoing reasons, it is respectfully requested that all rejections be withdrawn. All claims are in condition for allowance. If any minor matter remains to be resolved the Examiner is invited to telephone the undersigned with regard to the same.

Respectfully submitted,

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